Canada's Core Public Infrastructure Survey: Public transit, solid waste and asset management, 2018

Released at 8:30 a.m. Eastern time in The Daily, Thursday, January 21, 2021

Canada's public transit and solid waste management infrastructure was greener in 2018 compared with two years earlier. This was partially attributable to almost one-fifth more electric and hybrid buses and 52.2% more exclusive rights-of-way, or roadways reserved at all times for public transit use or other high-occupancy vehicles. The number of waste diversion facilities (recycling, composting and anaerobic digestion facilities) surpassed the number of active disposal facilities for the first time in 2018.

More buses are hybrid and electric in 2018

Public transit systems had a modest boost in their rolling stock from 2016 to 2018. In 2018, municipalities and regional, provincial and territorial governments owned 18,132 public transit buses (+280 from 2016) and 3,646 railcars (+167 from 2016).

While diesel buses comprised more than two-thirds (67.9%) of public transit bus fleets in 2018, the inventory of electric and hybrid buses grew by 18.6% from 2016 to 2018 and accounted for 12.8% of all buses. Bio-diesel buses accounted for another 14.9%.

Quebec's bus fleet had the highest share of cleaner vehicles in 2018—more than two-fifths (44.8%) of the fleet ran on bio-diesel, and one-fifth (19.9%) of buses were hybrid or electric.

Other rolling stock used for public transit in Canada included 1,740 specialized transit vehicles for persons with disabilities, which saw a sizable increase from 2016 (+459), and 245 streetcars. One-seventh (14.3%) of specialized transit assets were purchased in 2017 or 2018.





Table 1 Number of publicly owned rolling stock public transit assets, by type, Canada, 2018

	number
Total buses	18,132
Diesel buses	12,316
Bio-diesel buses	2,706
Electric buses	271
Natural gas buses	382
Hybrid buses (diesel, bio-diesel and natural gas)	2,046
Other buses	409
Other rolling stock	
Specialized transit (para or handi transpo and dial a ride)	1,740
Streetcars	245
Heavy railcars (subway)	2,023
Commuter railcars (locomotives and passenger)	1,273
Light railcars	350

Source(s): 34-10-0248-01

Buses in Newfoundland and Labrador and British Columbia are in the best condition

All buses were reported to be in good or very good condition in Newfoundland and Labrador in 2018. The province had the second-largest share (64.8%) of buses purchased since 2010, after Prince Edward Island (76.0%). British Columbia had the second-largest share (85.8%) of buses reported to be in good or very good condition. This was an 11.0% increase over 2016. More than one-tenth of the bus fleet in British Columbia was purchased in 2017 or 2018.

In contrast, Nova Scotia had the largest share of buses reported to be in poor or very poor condition (36.2%), followed by New Brunswick (16.4%). Three-fifths of public transit buses in Nova Scotia were purchased before 2010. Nova Scotia also had the smallest share (1.1%) of its total bus fleet purchased in 2017 or 2018 among the provinces.

The largest share of buses dating from before the year 2000 was in New Brunswick (15.7%). This was a marked improvement from 2016, however, when nearly one-third of its bus fleet was purchased prior to 2000. More than one-tenth(12.9%) of its bus fleet in 2018 was purchased in 2017 or 2018, making New Brunswick the province with the largest increase in buses reported to be in good or very good condition compared with 2016 (+15.8%).

No buses were purchased for public transit in the territories in 2017 or 2018. The share of buses reported to be in good or very good condition decreased by over one-fifth in Yukon (-21.0%) and the Northwest Territories (-20.8%). Nunavut did not have any public transit assets in 2018.

Majority of railcars are in good or very good condition

In 2018, almost one-fifth of the heavy railcar (subway) and light railcar stock was purchased in 2017 or 2018, and close to half (45.9%) of all railcars, including commuter railcars, were less than 10 years old.

More than four-fifths of railcars outside Quebec were reported to be in good or very good condition in 2018. The proportion of light railcars reported to be in poor or very poor condition fell from 40.2% in 2016 to 20.8% in 2018, and all of the railcars were in Alberta. Indeed, over one-fifth (22.5% of the stock) of the railcars in Alberta were reported to be in poor or very poor condition in 2018.

Ontario accounted for almost half (49.1%) of public transit railcars owned by provincial, territorial, regional and local governments in Canada. It was also the lone province that had all three types of railcars in 2018—commuter, heavy (subway) and light railcars.

All heavy and light railcars allowed for accessibility in 2018.

More roadways reserved for public transit and high-occupancy vehicles in 2018

There were 315 exclusive rights-of-way, or roadways reserved at all times for public transit use or for other high-occupancy vehicles in 2018, up 52.2% from two years earlier. This gave Canadians the opportunity to maximize highway infrastructure while reducing energy usage per person-trip.

British Columbia builds passenger stations and terminals in 2017 and 2018

Infrastructure such as bus shelters and terminals plays an essential role in public transit. In 2018, there were 27,564 transit shelters, 744 passenger stations and terminals, 11,073 bicycle racks and shelters, and 721 park-and-ride and passenger drop-off facilities in Canada.

Ontario, Quebec, British Columbia and Alberta accounted for the vast majority (96.2%) of all passenger stations and terminals. Most (71.1%) of these facilities were in good or very good condition. In British Columbia, 54 passenger stations and terminals were completed in 2017 or 2018, accounting for over one-third (37.2%) of the province's inventory in 2018.

Rural municipalities own over one-fifth of park-and-ride and passenger drop-off facilities

The low population density and larger travel distances that characterize rural municipalities limit transportation options available to residents. Park-and-ride and passenger drop-off facilities provide easier access to public transit systems. Rural municipalities owned almost one-third (31.8%) of all passenger drop-off facilities and almost one-fifth (18.1%) of park-and-ride parking lots in Canada.

Higher levels of government, such as regional, provincial and territorial governments, owned 23.0% of passenger drop-off facilities and 16.6% of park-and-ride parking lots. These facilities may be located in rural or urban areas.

Rural municipalities also reported close to one-tenth (8.6%) of all specialized transit rolling stock, which includes transit services for persons with disabilities, as well as vehicles for other non-conventional transit services such as dial-a-ride. Regional, provincial and territorial governments owned 27.7% of these assets in Canada in 2018.

Rural municipalities own the majority of solid waste assets

In Canada, provincial, territorial, regional and municipal governments owned and operated 3,284 waste disposal facilities, 1,981 transfer stations and 1,532 waste diversion facilities in 2018.

Solid waste tends to be processed outside city limits, with the majority of solid waste infrastructure owned by rural municipalities. However, in British Columbia, half (50.0%) of these assets were owned by regional governments, while all solid waste services were provided by the province in Prince Edward Island.

On average, there was one active waste disposal facility (excluding the 1,785 closed sites) for every 3.4 municipalities in 2018. Active waste disposal facilities included 737 dump sites, 716 engineered landfills, 26 incinerators and 20 energy-from-waste facilities.

Including closed sites, over half (52.5%) of publicly owned waste disposal facilities in Canada were under the responsibility of municipalities with fewer than 5,000 residents, mostly rural municipalities. Excluding closed sites, this share increases to 64.2%.

More waste facilities focus on recycling and composting than on active disposal in 2018

Every province and territory except Nunavut had at least one publicly owned composting facility and one materials recovery facility in 2018.

The number of waste diversion facilities (recycling, composting and anaerobic digestion facilities) surpassed the number of active disposal facilities in 2018. While active disposal facilities accounted for 54.7% of total waste diversion and active disposal assets in 2016, their share dropped to just under half (49.5%) in 2018.

The growing importance of waste diversion is reflected in the data. From 2010 to 2018, about two-fifths of publicly-owned waste diversion facilities were made operational, compared with 14.0% of waste disposal facilities. Over half (55.2%) of waste disposal facilities were built before 2000, while just under one-tenth (9.6%) of active dump sites and engineered landfills were constructed before 1970. In contrast, two waste diversion facilities (0.1% of the stock) were built prior to 1970 and less than one-fifth (18.9%) prior to 2000.

Note to readers

Canada's Core Public Infrastructure Survey of 2018 was conducted in partnership with Infrastructure Canada. The survey results cover nine asset types (roads; bridges and tunnels; culture, recreation and sports facilities; potable water; public transit; public social and affordable housing; solid waste; storm water; wastewater). The data cover topics such as stock, condition, performance and asset management strategies.

Data are based on responses from approximately 2,520 government organizations selected from Statistics Canada's Business Register, the central repository of information on public and private organizations operating in Canada. It is used as the principal frame for most of Statistics Canada's economic statistical programs.

The following organizations are included in the survey:

- provincial and territorial departments and ministries
- · regional governments
- urban and rural municipalities
- selected provincial Crown corporations and public transit authorities.

Estimates for 2018 may not be comparable with those for 2016 because of improved coverage and definitions, and changes in survey methodology, including an expanded target population. From 2016 to 2018, the questionnaire for Canada's Core Public Infrastructure Survey underwent several major changes.

- Responses to the questionnaire were collected through an electronic platform instead of a paper questionnaire.
- Questions were streamlined to reduce response burden.
- The survey included a census of all municipalities with at least 1,000 inhabitants and a sample of municipalities with between 500 and 1,000 inhabitants.
- For Quebec, the survey was conducted by the Institut de la statistique du Québec.

Respondents were provided the following condition rating scale when asked to rate the overall physical condition of their assets:

Very poor: Immediate need to replace most or all of the asset. There are health and safety hazards that present a possible risk to public safety, or the asset cannot be serviced or operated without risk to personnel. Major work or replacement is required urgently. The operating asset has less than 10% of its expected service life remaining.

Poor: Failure likely and substantial work required in the short term. Asset barely serviceable. No immediate risk to health or safety. The operating asset has less than 40% of its expected service life remaining.

Fair: Significant deterioration is evident; minor components or isolated sections of the asset need replacement or repair now, but the asset is still serviceable and functions safely at an adequate level of service. The operating asset has at least 40% of its expected service life remaining.

Good: Acceptable physical condition; minimal short-term failure risk, but potential for deterioration in the long term. Only minor work required. The operating asset has at least 80% of its expected service life remaining.

Very good: Sound physical condition. The asset is likely to perform adequately. The operating asset has at least 95% of its expected service life remaining.

Available tables: 34-10-0236-01 to 34-10-0265-01 , 34-10-0268-01, 34-10-0269-01, 34-10-0276-01 and 34-10-0277-01.

Definitions, data sources and methods: survey number 5173.

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; **STATCAN.infostats-infostats.STATCAN@canada.ca**) or Media Relations (613-951-4636; **STATCAN.mediahotline-ligneinfomedias.STATCAN@canada.ca**).

For more information about why the survey was conducted and how it will inform infrastructure policy and program development and investment decisions, please contact Infrastructure Canada (toll-free 1-877-250-7154; 613-948-1148; infc.info.infc@canada.ca) or Infrastructure Canada Media Relations (613-960-9251; infc.media.infc@canada.ca).